



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE MISLEADINGS OF INSTINCT

BY HORACE HUTCHINSON

IN those diaries of a field naturalist which Sir Herbert Maxwell calls *Memories of the Months* you will find it written "Still more extraordinary was the behavior of the blue titmouse, as described by Mr. W. Farrer. The female was sitting hard upon her eggs; her mate brought her so many caterpillars that she could eat no more, and refused to take any; whereupon he directed his attention to a brood of young hedge sparrows in a nest a few yards distant from his own establishment, and Mr. Farrer succeeded in photographing him in the act of feeding the nestlings of a species so little akin to his own as *Accentor modularis*. "The good Samaritan himself," Sir Herbert adds, "did not take a more liberal view of the question—Who is my neighbor?"

Thus comments Sir Herbert; but, of course, he knows—no one better—that it is with no idea of helping another—nor even of charity to its own babes—or of "playing the good Samaritan," as he says, that the titmouse so acted. Such an idea implies a mental conception quite impossible for the mentality of such a creature. What it was doing was simply gratifying its personal instinct to collect caterpillars and stuff them down somebody's gaping throat—his mate's for choice, but, failing her gullet, then some other. Thus, too, the cuckoo's foster parents. Thus, too, those ant communities which cherish in their midst the beetles of the *Lomechusa* clan which prey on the very ants, or on their larvæ. Yet the ants nurse and clean and shift these beetle larvæ with identically the same care as they give to their own. And here we see how wonderfully Providence has contrived all things for the

best—or, if you like it better, how wonderfully evolution has worked out its problems. To me it seems to matter not at all which you say, so long as you realize that it is by the way of evolution that Providence has decreed that the world shall go. These *Lomechusæ* breed so fast and are so carnivorous that if the ants let them alone they would quickly eat the ants out of house and home and very existence; but this care which the ants bestow on their larvæ, in common with their own, though exactly suited to the ant larvæ, in the changes of temperature and of moisture into which they bring them, is absolutely fatal to all but a very small percentage of the beetle babies. Thus a fair balance is struck. If the ants had even a feeble glimmer of intelligence to enable them to realize the *Lomechusæ* as their enemies, and therefore to deny them their nursing care, then they would infallibly so allow the number of their foes to increase as to eat them to their deaths. Fortunately for their own survival they are so little respecters of persons that they do for their deadliest enemies as for their own most cherished babes, and slay their thousands by this misdirected motherly care.

The observations of a very famous French field-naturalist have recently been made more easy for an English reader by translation into his own tongue. These are the *Souvenirs Entomologiques* of M. Fabre, of which a portion is given into our hands in one large and well-illustrated volume, with the title of *The Wonders of Instincts*. It is a good title, for the instinctive operations which it reveals to us are truly most wonderful. Yet it is a title which might be exchanged, with very little

loss of aptness, for that which gives its name to this article. We marvel—we can never cease to marvel—at the inspiration which moves the solitary wasp to store the cell made for its young with just such food as will best suit that babe which is yet unborn and which the parent will never see. We are filled with admiration of the secret motive which leads the grub of the Great Capricorn, after many months of boring in the heart of the hard tree-trunk, to bite its way, just before undergoing the change into the pupal form, almost to the very outside of the stem, so that only a thin rind shall be left for piercing by the perfect insect after the last metamorphosis. In its final perfection it has none of the great timber-cleaving jaws of the grub: but how was the grub to know this; who taught him? Surely none but He who “binds the sweet influence of the Pleiades and looses the bands of Orion.” Such foreknowledge is very far beyond the scope of any such faculty as our human reason. And yet, after a while of wondering out these seeming miracles which instinct prompts, we find ourselves, as we read M. Fabre’s pages, again and again amazed at the idiotic acts, as our human reason would pronounce them, to which this same instinct moves the creatures. There is one of the spiders which, so soon as she has laid her eggs and collected them into a ball of web, attaches the ball to her own hinder parts, and so travels about with it. From time to time she elevates it into the sunlight so that the eggs shall have the favor of the incubating warmth of the sun. M. Fabre, experimenting, found that the spider was not the least particular whether it were her own ball of eggs or another’s which she thus attached to herself. Further, he found her to be equally content with a ball of cork, or of rolled-up silk, as with a ball of eggs, and that she would sun this

barren bale of stuff exactly as if it were a pregnant sack of eggs. The evidence is simple—that so long as she could gratify the instinctive craving for the sensation of a bag or ball of something attached to her, she was well satisfied. The psychological value of M. Fabre’s work and testimony is great, quite apart from its passing interest for him who runs as he reads. Once for all he must surely have exploded the myth that instinct is reason in little, or that reason grows out of instinct. Quite obviously they are plants of a different species. He quotes Lacordaire, in his *Introduction to Entomology*, referring to the burying beetles, as a glaring instance of an advocate of the reason-ex-instinct myth: “‘The following case,’ he [that is, Lacordaire] continues, ‘recorded by Gleditsch, has also every indication of the intervention of reason. One of his friends, wishing to desiccate a frog, placed it on the top of a stick thrust into the ground, in order to make sure that the Necrophori (burying beetles) should not come and carry it off. But this precaution was of no effect; the insects, being unable to reach the frog, dug under the stick and, having caused it to fall, buried it as well as the body.’” Lacordaire cites this as an instance of reason in the beetles deliberately working under the stick’s base in order to insure its fall. M. Fabre, by probing the stick obliquely into the ground and hanging a mole so that it was suspended clear of the stick, proved that the beetles would always dig directly under the carrion. Thus digging, they would inevitably loosen the base of an upright stick by which it was supported, but they never disturbed at all the earth around the base of an inclined support. The conclusion of the matter is that reason is no more made out of instinct than an apple dumpling out of a pancake, though both are made by the same cook!—*The Westminster Gazette*.